# ROAD SYSTEM

# BRIDGES

### BR 2-010A ON SR 6 OVER DUCK CREEK, WOODLAND BEACH

**PROJECT SCOPE/DESCRIPTION:** Bridge 2010A provides the only access to Woodland Beach. Traffic will be maintained during the construction. Rehabilitation work will include replacement of the wearing surface; repair of the existing prestressed beam superstructure by epoxy injection; repair of the substructure though concrete patching, epoxy injection, and member reconstruction; repair of the piles by jacketing; minor approach work; and safety improvements.

**PROJECT JUSTIFICATION:** The bridge is in need of repair to maintain and extend the life of this single access to this local town and is currently ranked 107<sup>th</sup> out of 1,399 on the department's bridge deficiency list (via the bridge management program).

County: Kent

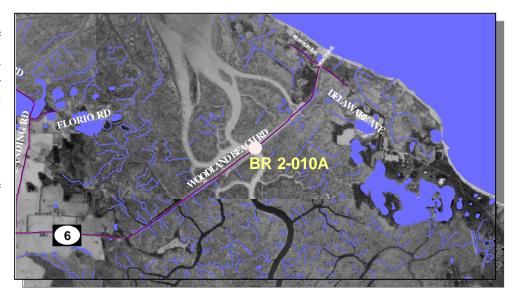
**Municipality:** 

Funding Program: Road System – Bridges

Functional Category: Preservation

**Representative District:** 9 **Senatorial District:** 14







# BR 2-010A ON SR 6 OVER DUCK CREEK, WOODLAND BEACH (CONTINUED)

Bridge 2-010A





# BR 2-010A ON SR 6 OVER DUCK CREEK, WOODLAND BEACH (CONTINUED)

Project	Funding Type	Original Estimate	Current Estimate	Authorization	Committed as of 12/31/03	Expended as of 12/31/03	Committed Unexpended as of 12/31/03	Authorization Available
BR 2-010A on SR 6 over Duck Creek, Woodland Beach		\$ 1,049.4						
Woodiand Beach		φ 1,042.4						
Prior Years	State			\$ 20.4	\$ 0.0	\$ 0.0	\$ 0.0	\$ 20.4
Thor rears	Federal			\$ 81.6	\$ 0.0	\$ 0.0	\$ 0.0	\$ 81.6
	Other			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
	- State			φ 0.0	Ψ 0.0	Ψ 0.0	Ψ 0.0	Ψ 0.0
FY 2004	State		\$ 1,049.4	\$ 189.5	\$ 193.4	\$ 15.8	\$ 177.7	\$ 16.5
	Federal		•	\$ 757.9	\$ 757.9	\$ 63.0	\$ 694.9	\$ 81.6
	Other			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
FY 2005 Request	State			\$ 0.0				\$ 16.5
	Federal			\$ 0.0				\$ 81.6
	Other			\$ 0.0				\$ 0.0
FY 2006 Projected	State			\$ 0.0				\$ 16.5
	Federal			\$ 0.0				\$ 81.6
	Other			\$ 0.0				\$ 0.0
FY 2007 Projected	State			\$ 0.0				\$ 16.5
•	Federal			\$ 0.0				\$ 81.6
	Other			\$ 0.0				\$ 0.0
FY 2008-2010 Projected	State			\$ 0.0				\$ 16.5
	Federal			\$ 0.0				\$ 81.6
	Other			\$ 0.0				\$ 0.0
Total Projected	State			\$ 209.9	\$ 193.4			\$ 16.5
	Federal			\$ 839.5	\$ 757.9			\$ 81.6
	Other			\$ 0.0	\$ 0.0			\$ 0.0
Total All Funds		\$ 1,049.4	\$ 1,049.4	\$ 1,049.4	\$ 951.3	\$ 78.8	\$ 872.5	\$ 98.1

# BR 2-010A ON SR 6 OVER DUCK CREEK, WOODLAND BEACH (CONTINUED)

Project #	Description	Phase	Funding Schedule	Current Estimate	Prior Years	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 -2010
22-075-02	BR 2-010A on SR 6 over Duck Creek, Woodland Beach	PE	80% FHWA	\$ 102.0	\$ 102.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
		RW	100% ST	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		С	80% FHWA	947.4	0.0	947.4	0.0	0.0	0.0	0.0
	Total All Funds			\$ 1,049.4	\$ 102.0	\$ 947.4	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0

## BR 2-022A ON NORTHWEST FRONT STREET (SR 14) OVER MULLET RUN

**PROJECT SCOPE/DESCRIPTION:** A study will be completed by maintenance forces to determine what improvements need to be completed. These could include minor maintenance, major rehabilitation and reconstruction, and / or total replacement.

**PROJECT JUSTIFICATION:** This bridge has structural spalls that are compromising the safety of the bridge. The bridge is currently ranked 147<sup>th</sup> out of 1,399 on the department's bridge deficiency list (via the bridge management program).

County: Kent Municipality: Milford

**Funding Program:** Road System – Bridges

**Functional Category:** Preservation

**Representative District:** 33 **Senatorial District:** 16, 18







# BR 2-022A ON NORTHWEST FRONT STREET (SR 14) OVER MULLET RUN (CONTINUED)

Project	Funding Type	Original Estimate	Current Estimate	Authorization	Committed as of 12/31/03	Expended as of 12/31/03	Committed Unexpended as of 12/31/03	Authorization Available
DD 2 0224 N. d. d. E. d.C.								
BR 2-022A on Northwest Front Street (SR 14) over Mullet Run		\$ 83.0						
(SK 14) over ividice Run		φ 05.0						
Prior Years	State			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
1101 1011	Federal			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
	Other			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
FY 2004	State		\$ 58.0	\$ 58.0	\$ 53.0	\$ 7.6	\$ 45.4	\$ 5.0
	Federal			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
	Other			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
FY 2005 Request	State			\$ 0.0				\$ 5.0
	Federal			\$ 0.0				\$ 0.0
	Other			\$ 0.0				\$ 0.0
FY 2006 Projected	State			\$ 0.0				\$ 5.0
	Federal			\$ 0.0				\$ 0.0
	Other			\$ 0.0				\$ 0.0
FY 2007 Projected	State			\$ 0.0				\$ 5.0
•	Federal			\$ 0.0				\$ 0.0
	Other			\$ 0.0				\$ 0.0
FY 2008-2010 Projected	State			\$ 0.0				\$ 5.0
	Federal			\$ 0.0				\$ 0.0
	Other			\$ 0.0				\$ 0.0
Total Projected	State			\$ 58.0	\$ 53.0			\$ 5.0
	Federal			\$ 0.0	\$ 0.0			\$ 0.0
	Other			\$ 0.0	\$ 0.0			\$ 0.0
Total All Funds		\$ 83.0	\$ 58.0	\$ 58.0	\$ 53.0	\$ 7.6	\$ 45.4	\$ 5.0

## BR 2-022A ON NORTHWEST FRONT STREET (SR 14) OVER MULLET RUN (CONTINUED)

Project #	Description	Phase	Funding Schedule	Current Estimate	Prior Years	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 -2010
23-072-01	BR 2-022A on Northwest Front Street (SR 14) over Mullet Run	PE	100% ST	\$ 52.0	\$ 0.0	\$ 52.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
		RW	100% ST	6.0	0.0	6.0	0.0	0.0	0.0	0.0
		С	80% FHWA	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total All Funds			\$ 58.0	\$ 0.0	\$ 58.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0

#### BR 2-050B ON SR 8 OVER TAPPAHANNA DITCH

**PROJECT SCOPE/DESCRIPTION:** The proposed work for Bridge 2050B will consist of replacing the existing concrete structure with a precast concrete box culvert and wingwalls. Riprap will be placed at the inlet and outlet for scour protection. Steel beam guardrail will also be placed.

**PROJECT JUSTIFICATION:** The existing structure is a concrete box culvert in poor condition. Both the box culvert and the wingwalls have several areas of delaminations and spalling. The bridge is currently ranked 137<sup>th</sup> out of 1,399 on the department's bridge deficiency list (via the bridge management program).

**County:** Kent

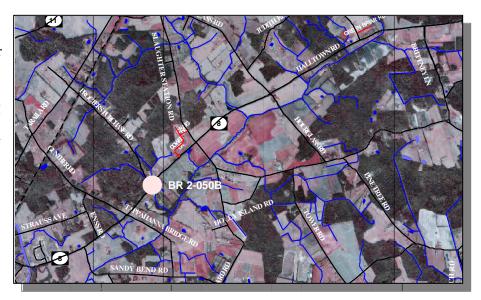
**Municipality:** 

**Funding Program:** Road System – Bridges

**Functional Category:** Preservation

**Representative District:** 29 **Senatorial District:** 15







# BR 2-050B ON SR 8 OVER TAPPAHANNA DITCH (CONTINUED)

Bridge 2-050B on SR 8



Underside of Bridge 2-050B



# BR 2-050B ON SR 8 OVER TAPPAHANNA DITCH (CONTINUED)

Project	Funding Type	Original Estimate	Current Estimate	Authorization	Committed as of 12/31/03	Expended as of 12/31/03	Committed Unexpended as of 12/31/03	Authorization Available
BR 2-050B on SR 8 over Tappahanna Ditch		\$ 635.0						
DR 2-030D 011 SR 8 0 VC1 Tappananna Ditti		φ 033.0						
Prior Years	State			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
1101 10015	Federal			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
	Other			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
FY 2004	State		\$ 701.4	\$ 83.0	\$ 83.0	\$ 0.0	\$ 83.0	\$ 0.0
F 1 2004	Federal		\$ 701.4	\$ 66.4	\$ 33.0 \$ 32.0	\$ 0.0	\$ 33.0 \$ 32.0	\$ 34.4
	Other			\$ 00.4	\$ 32.0	\$ 0.0	\$ 32.0	\$ 34.4
	Other			\$ U.U	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
FY 2005 Request	State			\$ 110.4				\$ 110.4
	Federal			\$ 441.6				\$ 476.0
	Other			\$ 0.0				\$ 0.0
FY 2006 Projected	State			\$ 0.0				\$ 110.4
	Federal			\$ 0.0				\$ 476.0
	Other			\$ 0.0				\$ 0.0
FY 2007 Projected	State			\$ 0.0				\$ 110.4
	Federal			\$ 0.0				\$ 476.0
	Other			\$ 0.0				\$ 0.0
FY 2008-2010 Projected	State			\$ 0.0				\$ 110.4
	Federal			\$ 0.0				\$ 476.0 \$ 0.0
	Other			\$ 0.0				\$ 0.0
Total Projected	State			\$ 193.4	\$ 83.0			\$ 110.4
	Federal			\$ 508.0	\$ 32.0			\$ 476.0
	Other	_		\$ 0.0	\$ 0.0			\$ 0.0
Total All Funds		\$ 635.0	\$ 701.4	\$ 701.4	\$ 115.0	\$ 0.0	\$ 115.0	\$ 586.4

## BR 2-050B ON SR 8 OVER TAPPAHANNA DITCH (CONTINUED)

Project #	Description	Phase	Funding Schedule	Current Estimate	Prior Years	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 -2010
24-072-01	BR 2-050B on SR 8 over Tappahanna Ditch	PE	80% FHWA	\$ 83.0	\$ 0.0	\$ 83.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
		RW	100% ST	66.4	0.0	66.4	0.0	0.0	0.0	0.0
		C	80% FHWA	552.0	0.0	0.0	552.0	0.0	0.0	0.0
	Total All Funds			\$ 701.4	\$ 0.0	\$ 149.4	\$ 552.0	\$ 0.0	\$ 0.0	\$ 0.0

#### BR 2-113B AND BR 2-113C ON CATTAIL BRANCH ROAD

**PROJECT SCOPE/DESCRIPTION:** The proposed work for each bridge will consist of replacing each existing structure with a precast concrete rigid frame. Approaches for both bridges will be reconstructed with steel beam guardrail added. Riprap will be placed at the openings of each structure to provide protection from the effects of scour.

**PROJECT JUSTIFICATION:** The existing bridges are corrugated steel pipes in poor condition. The corrosion at the waterline present in each structure will only worsen and needs to be fixed. These bridges currently rank 75<sup>th</sup> and 77<sup>th</sup>, respectively, out of 1,399 on the department's bridge deficiency list (via the bridge management program).

County: Kent

**Municipality:** 

**Funding Program:** Road System – Bridges

Functional Category: Preservation

**Representative District:** 30 **Senatorial District:** 16







## BR 2-113B AND BR 2-113C ON CATTAIL BRANCH ROAD (CONTINUED)

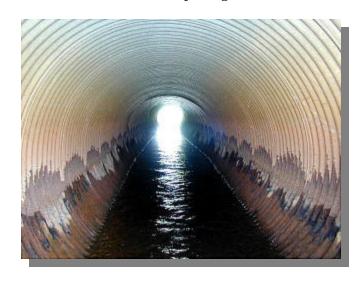
Bridge 2-113B



Bridge 2-113C



Underside of Bridge 2-113B



Underside of Bridge 2-113C



## BR 2-113B AND BR 2-113C ON CATTAIL BRANCH ROAD (CONTINUED)

Project	Funding Type	Original Estimate	Current Estimate	Authorization	Committed as of 12/31/03	Expended as of 12/31/03	Committed Unexpended as of 12/31/03	Authorization Available
BR 2-113B and BR 2-113C on Cattail Branch Road		\$ 1,040.0						
Prior Years	State			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
	Federal			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
	Other			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
FY 2004	State		\$ 1,040.0	\$ 26.2	\$ 26.2	\$ 2.5	\$ 23.7	\$ 0.0
	Federal		, ,,	\$ 104.8	\$ 104.8	\$ 9.8	\$ 95.0	\$ 0.0
	Other			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
TV ACCE D	g, ,			4 101 0				<b>.</b>
FY 2005 Request	State Federal			\$ 181.8 \$ 727.2				\$ 181.8
	Other			\$ 727.2 \$ 0.0				\$ 727.2 \$ 0.0
FY 2006 Projected	State			\$ 0.0				\$ 181.8
	Federal			\$ 0.0				\$ 727.2
	Other			\$ 0.0				\$ 0.0
FY 2007 Projected	State			\$ 0.0				\$ 181.8
	Federal			\$ 0.0				\$ 727.2
	Other			\$ 0.0				\$ 0.0
FY 2008-2010 Projected	State			\$ 0.0				\$ 181.8
F 1 2008-2010 F 10 Jected	Federal			\$ 0.0				\$ 727.2
	Other			\$ 0.0				\$ 727.2
Total Projected	State			\$ 208.0	\$ 26.2			\$ 181.8
	Federal			\$ 832.0	\$ 104.8			\$ 727.2
	Other			\$ 0.0	\$ 0.0			\$ 0.0
Total All Funds		\$ 1,040.0	\$ 1,040.0	\$ 1,040.0	\$ 131.0	\$ 12.3	\$ 118.7	\$ 909.0

## BR 2-113B AND BR 2-113C ON CATTAIL BRANCH ROAD (CONTINUED)

Project #	Description	Phase	Funding Schedule	Current Estimate	Prior Years	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 -2010
	BR 2-113B and BR 2-113C on Cattail Branch Road	PE	80% FHWA	\$ 131.0	\$ 0.0	\$ 131.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
		RW	80% FHWA	24.0	0.0	0.0	24.0	0.0	0.0	0.0
		С	80% FHWA	885.0	0.0	0.0	885.0	0.0	0.0	0.0
	Total All Funds			\$ 1,040.0	\$ 0.0	\$ 131.0	\$ 909.0	\$ 0.0	\$ 0.0	\$ 0.0

### BR 2-210A ON SHADY BRIDGE ROAD OVER SHADES BRANCH, SOUTH OF MARYDEL

**PROJECT SCOPE/DESCRIPTION:** This project will involve the replacement of the existing steel girder/timber deck bridge on Shady Bridge Road (K210) with a prestressed concrete bridge with pile-supported abutments, protected by riprap. Work may include re-alignment of the approaches. Each approach will have guardrail placed in front of the abutments to a similar extent as exists now.

**PROJECT JUSTIFICATION:** The bridge capacity is substandard, and it is functionally obsolete. This bridge is ranked 61<sup>st</sup> out of 1,399 on the department's bridge deficiency list (via the bridge management program).

County: Kent

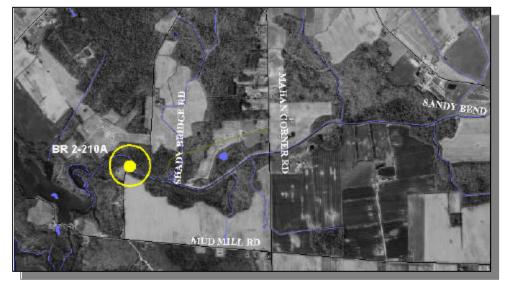
**Municipality:** 

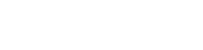
**Funding Program:** Road System – Bridges

**Functional Category:** Preservation

**Representative District:** 29 **Senatorial District:** 15











## BR 2-210A ON SHADY BRIDGE ROAD OVER SHADES BRANCH, SOUTH OF MARYDEL (CONTINUED)

Project	Funding Type	Original Estimate	Current Estimate	Authorization	Committed as of 12/31/03	Expended as of 12/31/03	Committed Unexpended as of 12/31/03	Authorization Available
BR 2-210A on Shady Bridge Road over Shades Branch, South of Marydel		\$ 695.0						
Prior Years	State			\$ 329.4	\$ 329.4	\$ 203.8	\$ 125.6	\$ 0.0
	Federal			\$ 556.0	\$ 448.6	\$ 1.7	\$ 446.8	\$ 107.4
	Other			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
FY 2004	State		\$ 885.4	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
11200	Federal		ψ σσει.	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 107.4
	Other			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
FY 2005 Request	State			\$ 0.0				\$ 0.0
	Federal			\$ 0.0				\$ 107.4
	Other			\$ 0.0				\$ 0.0
FY 2006 Projected	State			\$ 0.0				\$ 0.0
	Federal			\$ 0.0				\$ 107.4
	Other			\$ 0.0				\$ 0.0
FY 2007 Projected	State			\$ 0.0				\$ 0.0
•	Federal			\$ 0.0				\$ 107.4
	Other			\$ 0.0				\$ 0.0
FY 2008-2010 Projected	State			\$ 0.0				\$ 0.0
	Federal			\$ 0.0				\$ 107.4
	Other			\$ 0.0				\$ 0.0
Total Projected	State			\$ 329.4	\$ 329.4			\$ 0.0
	Federal			\$ 556.0	\$ 448.6			\$ 107.4
	Other			\$ 0.0	\$ 0.0			\$ 0.0
Total All Funds		\$ 695.0	\$ 885.4	\$ 885.4	\$ 778.0	\$ 205.6	\$ 572.4	\$ 107.5

## BR 2-210A ON SHADY BRIDGE ROAD OVER SHADES BRANCH, SOUTH OF MARYDEL (CONTINUED)

Project #	Description	Phase	Funding Schedule	Current Estimate	Prior Years	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 -2010
21-072-01	BR 2-210A on Shady Bridge Road over Shades Branch, South of Marydel	PE	100% ST	\$ 182.4	\$ 182.4	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
		RW	100% ST	8.0	8.0	0.0	0.0	0.0	0.0	0.0
		С	80% FHWA	695.0	695.0	0.0	0.0	0.0	0.0	0.0
	Total All Funds			\$ 885.4	\$ 885.4	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0

#### BR 2-295A ON K295 OVER TRIBUTARY OF MARSHYHOPE CREEK

**PROJECT SCOPE/DESCRIPTION:** This project will involve the replacement of corrugated metal pipes with a precast concrete box culvert with a depressed invert, using the clear zone concept. Riprap will be placed at the culvert inlet and outlet for scour protection.

**PROJECT JUSTIFICATION:** The two eight-foot diameter corrugated metal pipes have experienced advanced corrosion at the waterline and are perforated at this location. This bridge is ranked 76<sup>th</sup> out of 1,399 on the department's bridge deficiency list (via the bridge management program).

County: Kent

**Municipality:** 

**Funding Program:** Road System – Bridges

**Functional Category:** Preservation

**Representative District:** 30 **Senatorial District:** 16







# BR 2-295A ON K295 OVER TRIBUTARY OF MARSHYHOPE CREEK (CONTINUED)

Bridge 2-295A on K295 over Tributary of Marshyhope Creek



Inside Bridge 2-295A



## BR 2-295A ON K295 OVER TRIBUTARY OF MARSHYHOPE CREEK (CONTINUED)

Project	Funding Type	Original Estimate	Current Estimate	Authorization	Committed as of 12/31/03	Expended as of 12/31/03	Committed Unexpended as of 12/31/03	Authorization Available
BR 2-295A on K295								
over Tributary of Marshyhope Creek		\$ 532.0						
Prior Years	State			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
	Federal			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
	Other			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
FY 2004	State		\$ 532.0	\$ 82.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 82.0
	Federal			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
	Other			\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
FY 2005 Request	State			\$ 90.0				\$ 172.0
	Federal			\$ 360.0				\$ 360.0
	Other			\$ 0.0				\$ 0.0
FY 2006 Projected	State			\$ 0.0				\$ 172.0
	Federal			\$ 0.0				\$ 360.0
	Other			\$ 0.0				\$ 0.0
FY 2007 Projected	State			\$ 0.0				\$ 172.0
•	Federal			\$ 0.0				\$ 360.0
	Other			\$ 0.0				\$ 0.0
FY 2008-2010 Projected	State			\$ 0.0				\$ 172.0
	Federal			\$ 0.0				\$ 360.0
	Other			\$ 0.0				\$ 0.0
Total Projected	State			\$ 172.0	\$ 0.0			\$ 172.0
	Federal			\$ 360.0	\$ 0.0			\$ 360.0
	Other			\$ 0.0	\$ 0.0			\$ 0.0
Total All Funds		\$ 532.0	\$ 532.0	\$ 532.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 532.0

## BR 2-295A ON K295 OVER TRIBUTARY OF MARSHYHOPE CREEK (CONTINUED)

Project #	Description	Phase	Funding Schedule	Current Estimate	Prior Years	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008 -2010
	BR 2-295A on K295 over Tributary of Marshyhope Creek	PE	100% ST	\$ 70.0	\$ 0.0	\$ 70.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
		RW	100% ST	12.0	0.0	12.0	0.0	0.0	0.0	0.0
		С	80% FHWA	450.0	0.0	0.0	450.0	0.0	0.0	0.0
	Total All Funds			\$ 532.0	\$ 0.0	\$ 82.0	\$ 450.0	\$ 0.0	\$ 0.0	\$ 0.0